

# Healthcare Worker Vaccination Recommendations

Vaccine	Recommendations in brief
<b>Hepatitis B</b>	Give 3-dose series (dose #1 now, #2 in 1 month, #3 approximately 5 months after #2). Give IM. Obtain anti-HBs serologic testing 1–2 months after dose #3.
<b>Influenza</b>	Give 1 dose of TIV or LAIV annually. Give IM or intranasally, respectively.
<b>MMR</b>	For persons born in 1957 or later without serologic evidence of immunity or prior vaccination, give 2 doses of MMR, 4 weeks apart. Give SC.
<b>Varicella (chickenpox)</b>	For persons who have no serologic proof of immunity, prior vaccination, or history of varicella disease, give 2 doses of varicella vaccine, 4 weeks apart. Give SC.
<b>Tetanus/diphtheria</b>	All adults need a Td booster dose every 10 years, following the completion of the primary 3-dose series. Give IM. <b>Note:</b> As of Aug. 2005, CDC's Advisory Committee on Immunization Practices (ACIP) is in discussion about the use of acellular pertussis vaccine in healthcare workers (HCWs).
<b>Meningococcal</b>	Give 1 dose to microbiologists who are routinely exposed to isolates of <i>N. meningitidis</i> .

*Hepatitis A, typhoid, and polio vaccines are not routinely recommended for HCWs who may have on-the-job exposure to fecal material.*

## Hepatitis B

Healthcare workers (HCWs) who perform tasks that may involve exposure to blood or body fluids should receive a 3-dose series of hepatitis B vaccine at 0-, 1-, and 6-month intervals. Test for hepatitis B surface antibody (anti-HBs) to document immunity 1–2 months after dose #3.

- If anti-HBs is at least 10 mIU/mL (positive), the patient is immune. No further serologic testing or vaccination is recommended.
- If anti-HBs is less than 10 mIU/mL (negative), the patient is unprotected from HBV infection; revaccinate with a 3-dose series. Retest anti-HBs 1–2 months after dose #3.
  - If anti-HBs is positive, the patient is immune. No further testing or vaccination is recommended.
  - If anti-HBs is negative following 6 doses of vaccine, the patient is a **non-responder**.

**For non-responders:** Persons who are non-responders should be considered susceptible to HBV and should be counseled regarding precautions to prevent HBV infection and the need to obtain HBIG prophylaxis for any known or probable parenteral exposure to hepatitis B surface antigen (HBsAg)-positive blood.\* It is also possible that non-responders are persons who are HBsAg positive. Testing should be considered. Persons found to be HBsAg positive should be counseled and medically evaluated.

**Note:** Anti-HBs testing is not recommended routinely for previously vaccinated HCWs who were not tested 1–2 months after their original vaccine series. These HCWs should be tested for anti-HBs when they have an exposure to blood or body fluids. If found to be anti-HBs negative, the HCW should be protected.\*

## Influenza

**Trivalent (Inactivated) Influenza Vaccine (TIV):** May give to any HCW. **Live, Attenuated Influenza Vaccine (LAIV):** May give to any non-pregnant healthy HCW age 49 years and younger.

1. All HCWs should receive annual influenza vaccine. Groups that should be targeted include all personnel (including volunteers) in hospitals, outpatient, and home-health settings who have any patient contact.
2. TIV is preferred over LAIV for HCWs who are in close contact with severely immunosuppressed persons (e.g., stem cell transplant patients) when patients require a protective environment.

## Measles, Mumps, Rubella (MMR)

Persons who work in medical facilities should be immune to measles and rubella. Immunity to mumps is highly desirable.

- Persons born in 1957 or later can be considered immune to measles, mumps, or rubella only if they have documentation of (a) physician-diag-

nosed measles or mumps disease; or (b) laboratory evidence of measles, mumps, or rubella immunity (persons who have an “indeterminate” or “equivocal” level of immunity upon testing should be considered nonimmune); or (c) appropriate vaccination against measles, mumps, and rubella (i.e., administration on or after the first birthday of two doses of live measles vaccine separated by 28 days or more, at least one dose of live mumps vaccine, and at least one dose of live rubella vaccine).

- Although birth before 1957 generally is considered acceptable evidence of measles and rubella immunity, healthcare facilities should consider recommending a dose of MMR vaccine to unvaccinated HCWs born before 1957 who are in either of the following categories: (a) do not have a history of measles disease or laboratory evidence of measles immunity and (b) do not have laboratory evidence of rubella immunity.

## Varicella

It is recommended that all HCWs be immune to varicella, either from a reliable history of varicella disease or vaccination. Serologic screening for varicella immunity need not be done before vaccinating unless the healthcare institution considers it cost effective. Routine postvaccination testing of HCWs for antibodies to varicella is not recommended because commercial tests are often not sensitive enough to measure vaccine-induced immunity.

## Tetanus/Diphtheria (Td)

All persons should receive a Td booster every 10 years. A 3-dose primary series of a tetanus/diphtheria-containing product (DTP, DTaP, DT, Td) is necessary before a booster dose is given. **Note:** As of Aug. 2005, ACIP is in discussion about the use of acellular pertussis vaccine in HCWs.

## Meningococcal

Vaccination is recommended for microbiologists who are routinely exposed to isolates of *N. meningitidis*. Use of MCV4 is preferred among persons ages 11–55 years; give IM. If MCV4 is unavailable, MPSV4 is an acceptable alternative for persons ages 11–55 years. Use of MPSV4 is recommended for persons older than age 55; give SC.

## References

\*Table 3: “Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Postexposure Prophylaxis,” *MMWR*, June 29, 2001, Vol. 50, RR-11.

For additional specific ACIP recommendations, refer to the official ACIP statements published in *MMWR*. To obtain copies, visit CDC's website at [www.cdc.gov/nip/publications/ACIP-list.htm](http://www.cdc.gov/nip/publications/ACIP-list.htm); or visit the Immunization Action Coalition (IAC) website at [www.immunize.org/acip](http://www.immunize.org/acip).

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